(12) INTERNATIONAL

LICATION PUBLISHED UNDER THE PATA

COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 6 June 2002 (06.06.2002)

(10) International Publication Number

(51) International Patent Classification7:

WO 02/44697 A1

- G01N 21/45
- (21) International Application Number: PCT/IB01/01814
- (22) International Filing Date: 2 October 2001 (02.10.2001)
- (25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): COM-MISSARIAT A L'ENERGIE ATOMIQUE [FR/FR]; 31/33, rue de la Fédération, F-75752 Paris 15ème (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LAFFONT, Guillaume [FR/FR]; 87, rue Juliette Adam, F-91190 Gif sur Yvette (FR). FERDINAND, Pierre [FR/FR]; 96, rue des Martyrs de la Résistance, F-78800 Houilles (FR).

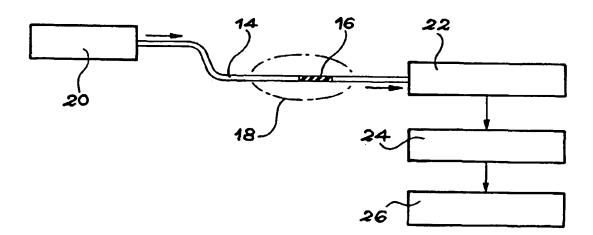
- (74) Agent: DUBOIS-CHABERT, Guy; Brevatome, 3, rue du Docteur Lancereaux, F-75008 Paris (FR).
- (81) Designated States (national): BR, CA, US.
- (84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: REFRACTOMETER WITH BLAZED BRAGG GRATINGS



(57) Abstract: In order to measure the refractive index of a medium (18), for example a liquid or a gas, this system comprises a waveguide (14) having a blazed Bragg grating (16), the spectral response of which depends on the refractive index of the medium, a light source (20) in order to make this light interact with the grating, means (22) for the spectral analysis of the light which has interacted with the grating, means (24) for recovering the spectrum provided by the spectral analysis means and means (26) to correlate, from the recovered spectrum, the spectral response of the grating with one value of the refractive index of the medium.